



U.S. HOUSE OF REPRESENTATIVES  
COMMITTEE ON ENERGY AND COMMERCE

February 3, 2015

TO: Members, Subcommittee on Environment and the Economy

FROM: Committee Majority Staff

RE: Mark-Up of “H.R. 212, the ‘Drinking Water Protection Act’”

On Thursday, February 5, 2015, immediately following the 10:00 a.m. hearing in 2123 Rayburn House Office Building, the Subcommittee on Environment and the Economy will conduct a mark-up of H.R. 212, “Drinking Water Protection Act.”

**I. BACKGROUND**

**A. Algal Toxins**

Algae – of which cyanobacteria is a subset -- are often found in lakes and other surface water. Certain combinations of conditions trigger growth of algae in these waters, including warm water temperatures and high levels of light and nutrients (primarily phosphorus and nitrogen). Nutrients include agricultural runoff (fertilizers and manure); discharges from sewage treatment plants; and storm-water runoff from lawns, streets, and elsewhere.

Some algae contain or create various toxins that can contaminate surface waters and drinking water supplies. These toxins can affect the liver, skin, or nervous system. Exposure to algal toxins can cause a range of health effects, from mild rashes to severe illness and, in rare cases, death in humans. In addition, deaths of exposed wildlife, livestock, birds, and pets have been documented worldwide.<sup>1</sup>

Most human exposures are thought to occur during recreational activities, such as swimming and boating, through accidental ingestion or inhalation of water, or when skin comes into contact with toxins. Exposures also can result from drinking or showering in contaminated water.<sup>2</sup>

**B. Drinking Water Standards for Algal Toxins**

No enforceable Federal standards or guidelines have been established for algal toxins in drinking water. The World Health Organization (WHO) has issued a provisional drinking water standard of 1 microgram per liter (µg/L, or parts per billion) for microcystin-LR, one of the most

<sup>1</sup> <http://www.crs.gov/pages/Insights.aspx?PRODCODE=IN10131>

<sup>2</sup> Ibid.

common and harmful algal toxins. Ohio and Oregon have adopted the WHO drinking water guidance levels, while Minnesota has established a more stringent level based on acute infant exposure.

On August 8, 2014, the Association of State Drinking Water Administrators (ASDWA) published the results of a survey it took on States' responses to cyanobacteria and cyanotoxins (cyanobacteria that is now producing toxins) in drinking water. The survey responses indicate that while nine States have created programs, developed health thresholds, or enacted policies and protocols for sampling and issuing public notices, all of the respondents would like to have more Federal (or national) leadership to help them address these issues. The respondents specifically noted in their comments that help is needed to:

- Provide Federal guidance values and analytical methods and risk communications strategies;
- Develop appropriate notification language to better inform the public when a cyanobacteria bloom is occurring, taste and odor complaints are received from customers, gastro-intestinal illnesses are reported, and toxin concentrations exceed thresholds in drinking water supplies;
- Address issues when toxins concentrate in treatment facility sludge without any blooms in the water source; and,
- Consider the impacts to Ground Water Under the Direct Influence of surface waters that have toxic blooms (public water supply wells may tap groundwater influenced by surface water).

### **C. Challenges to Governmental Involvement Concerning Algal Toxins in Water Supplies**

An Environmental Protection Agency (EPA) factsheet notes that conditions that cause algae to produce toxins are not well understood.<sup>3</sup> Further, biochemical and analytical complexities make it difficult to determine which toxins are present.<sup>4</sup> Not only does incorrect identification of an algal toxin by a water system complicate its ability to properly treat for it, but selection of the wrong treatment can cause some bacteria to release more toxins into the water.

EPA is working to issue a health advisory to help States and water providers address certain cyanotoxins. Authorized under section 1412(b)(1)(F) of the Safe Drinking Water Act (SDWA), health advisories generally include non-enforceable contaminant values based on non-cancer health effects, and technical guidance on health effects, test methods, and treatment technologies. In 2015, EPA plans to issue advisories for those cyanotoxins for which it has sufficient health effects data, microcystin-LR and cylindrospermopsin. Also in 2015, EPA plans to finalize analytical methods for microcystins-LR and the other targeted cyanotoxins. These methods will allow more specific measurement of the toxins, at lower concentrations and with greater accuracy and precision.<sup>5</sup>

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<sup>3</sup> [http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/cyanobacteria\\_factsheet.pdf](http://water.epa.gov/scitech/swguidance/standards/criteria/nutrients/upload/cyanobacteria_factsheet.pdf)

<sup>4</sup> Ibid.

<sup>5</sup> <http://www.crs.gov/pages/Insights.aspx?PRODCODE=IN10131>

To pursue enforceable drinking water regulations under SDWA, EPA must engage in a multi-step process. First, EPA must regularly prepare contaminant candidate lists (CCLs), which identify and prioritize contaminants that may require regulation. In 1998, EPA listed cyanobacteria and their toxins as candidates for regulation. EPA's 2009 list CCL-3 included three cyanotoxins (microcystin-LR, anatoxin-a, and cylindrospermopsin).

Second, to satisfy SDWA criteria to begin drafting enforceable regulation of a contaminant, EPA must make a determination that the contaminant requires national regulation to provide a "meaningful opportunity for health risk reduction for persons served by public water systems" based on the contaminant's occurrence in public water systems and health risks.<sup>6</sup> To meet SDWA requirements for a regulatory determination, EPA needs additional health effects and occurrence data for each of the toxins. EPA is conducting health effects research and developing analytical testing methods for the cyanotoxins. Additionally, EPA could employ section 1445 of SDWA to help it better understand the occurrence of cyanotoxins in drinking water by establishing a rule targeted monitoring of unregulated contaminants (UCMR).

Similarly, if EPA decided to regulate the toxins, more data are needed to proceed. Currently, the risk of exposure to low levels of algal toxins in drinking water is too uncertain to support standard setting.

## **II. SUMMARY OF AMENDMENT IN THE NATURE OF A SUBSTITUTE (AINS) TO H.R. 212**

The Amendment in the Nature of a Substitute makes the following changes to H.R. 212: it replaces "cyanotoxins" with "algal toxins"; in two places replaces "cyanobacteria with "toxins-producing cyanobacteria and algae"; and in two places changes "cyanobacteria" to "algal toxins". Otherwise, the text reflects H.R. 212, as introduced on January 8, 2015, by Rep. Bob Latta. The Amendment maintains three main components.

First, the Amendment requires EPA, within 90 days of its enactment and subject to later updates, to develop and submit to Congress a strategic plan for assessing and managing risks from algal toxins in drinking water provided by public water systems. The strategic plan must include steps EPA plans to take as well as its timelines for:

- evaluating risks to human health;
- publishing a comprehensive list of algal toxins EPA determines harmful to health when present in that drinking water, as well as summarizing their known health effects;
- identifying factors that make toxin producing cyanobacteria and algae to become harmful;
- determining whether to publish health advisories on specific algal toxins, establishing guidance for feasible analytical methods to quantify the presence of algal toxins, and setting guidance on monitoring frequency;
- recommending feasible treatment options to mitigate any adverse health effects caused by identified algal toxins; and,

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<sup>6</sup> SDWA section 1412(b)(1)

- entering into cooperative agreements and providing technical assistance to affected States and public water systems to aid in managing risks associated with algal toxins in drinking water.

Second, the Amendment requires EPA to identify gaps in (1) its understanding of the human health effects of cyanobacteria and algae that produce toxins and (2) the methods and means of testing and monitoring for the presence of harmful algal blooms in the source water of or drinking water provided by public water systems. EPA, as appropriate, is then asked to consult with other Federal agencies, States, and those agencies or bodies actively analyzing algal toxins and their impact on public health and publish the information possessed by the Federal government.

Finally, the Amendment requires the Government Accountability Office to inventory and report to Congress on Federal spending, between fiscal years 2010 and 2014, on analyses and public health efforts of the Federal government on toxins producing cyanobacteria and algae, including the specific purpose for which the funds were made available, the law under which the funds were authorized, the Federal agency that received or spent the funds, and recommended steps to reduce any duplication, and improve interagency coordination, of such expenditures.

### **III. STAFF CONTACT**

Please contact Jerry Couri or David McCarthy, with the Committee Staff at (202) 225-2927 with any questions.